

Figure 1

M K L P V R L L V L M F W I P A
ATG AAG TTG CCT GTT AGG CTG TTG GTG CTG ATG TTC TGG ATT CCT GCT
S S D
TCC AGC GAT (-1 to -19, leader)

D V L M T Q T P L S L P V S L G
GAT GTT TTG ATG ACC CAA ACT CCA CTC TCC CTG CCT GTC AGT CTT GGA
D Q A S I S C
GAT CAA GCC TCC ATC TCT TGC (1-23, Frame work 1)

R S S Q S I V H S N G N T Y L E
AGA TCT AGT CAG AGC ATT GTA CAT AGT AAT GGA AAC ACC TAT TTA GAA
(24-39, CDR 1)

W Y L Q K P G Q S P N L L I Y
TGG TAC CTA CAG AAA CCA GGC CAG TCT CCA AAC CTC CTG ATC TAC
(40-54, Frame work 2)

F V S N R F S
TTT GTT TCC AAC CGA TTT TCT (55-61, CDR 2)

G V P D R F S G S G S G T D F T
GGG GTC CCA GAC AGG TTC AGT GGC AGT GGA TCA GGG ACA GAT TTC ACA
L K I S R V E A E D L G V Y Y C
CTC AAG ATC AGC AGA GTG GAG GCT GAG GAT CTG GGA GTT TAT TAC TGC
(62-93, Frame work 3)

F Q G S H V P W T
TTT CAA GGT TCA CAT GTT CCG TGG ACG
(94-102, CDR 3)

F G G G T K L E I K
TTC GGT GGA GGC ACC AAG CTG GAA ATC AAA
(103-112, Frame work 4)

R A D A A P T V S I F P P
CGG GCT GAT GCT GCA CCA ACT GTA TCC ATC TTC CCA CCA

S S K L G
TCC AGT AAG CTT GGG (Constant region)

24

Figure 2

M A V L G L L F C L V T F P S C
ATG GCT GTC TTG GGG CTG CTC TTC TGC CTG GTG ACA TTC CCA AGC TGT
V L S
GTC CTG TCC (-1 to -19, Leader)

Q V Q V K E S G P F L V P P S Q
CAG GTG CAG GTG AAG GAG TCA GGA CCT TTC CTG GTG CCC CCC TCA CAG
S L S I T C T V S G F S L T
AGC CTG TCC ATC ACA TGC ACT GTC TCA GGG TTC TCA TTA ACC
(1-30, Frame work 1)

T Y G V S
ACC TAT GGT GTA AGC (31-35, CDR 1)

W I R Q P P G K G L E W L G
TGG ATT CGC CAG CCT CCA GGA AAG GGT CTG GAG TGG CTG GGA
(36-49, Frame work 2)

A I W G D G T T N Y H S A L I S
GCA ATT TGG GGT GAC GGG ACC ACA AAT TAT CAT TCA GCT CTC ATA TCC
(50-65, CDR 2)

R L S I S K D N S K S Q V F L K
AGA CTG AGC ATC AGC AAG GAT AAC TCC AAG AGC CAA GTT TTC TTA AAA
L N S L Q T D D T A T Y Y C A K
CTG AAC AGT CTG CAA ACT GAT GAC ACG GCC ACG TAC TAC TGT GCC AAA
(66-97, Frame work 3)

L G N Y D A L D W
CTG GGT AAC TAC GAT GCT CTG GAC TAC
(98-106, CDR 3)

W G Q G T S V T V S S
TGG GGT CAA GGA ACC TCA GTC ACC GTC TCC TCA
(107-117, Frame work 4)

A K T T P P P V Y P L V P G S L
GCC AAA ACG ACA CCC CCA CCC GTC TAT CCA TTG GTC CCT GGA AGC TTG GG
(Constant region)

66540-EE56260

Figure 3(A)

1A7: 1 DVLMTQTPLSLPVSLGDQASISCRSSQSIVHSNGNTYLEWYLQKPGQSPNLLIYFVSNRF 60

1	1	.....K....K.....	60
2	1	.....K....K.....	60
3	1	..V.....K....K.....	60
4	1	.....K....K.....	60
5	1	.....K....K.....	60
6	1	.....K....K.....	60
7	1	.....K....K.....	60
8	1	.....X..K....K.....	60
9	5	.....S...F.....K....K.....	64
10	1	.....K....K.....	60
11	1	.....K....K.....	60
12	20	.....K....K.....	79
13	1	.....K....K....L	60
14	1	.....K....K.....	60
15	5	.....S...F.....K....K.....	64

1A7: 61 SGVPDRFSGSGGTDFTLKISRVEAEDLGVIYCFQGSHPWTFGGGTKLEIK 112

1	61	.....	112
2	61	.....	112
3	61	.....	112
4	61	.....	111
5	61	...X.....	112
6	61	.....Y.....	112
7	61	.....C.....	111
8	61	.....	111
9	65	.....T.....	116
10	61	.....R.....Y.....	112
11	61	.....R.....	112
12	80	.....Y...S.....	131
13	61	.....Y.....	112
14	61	.....T.....W.....Y.....	112
15	65	.....Q.....T.....	116

06293533 041599

Figure 3(B)

1A7:	1	QVQVKESGPFLVPPSQSLITCTVSGFSLTTYGVSWIRQPPGKGLEWLGAIWGDGTTNYH	60
1	1	.G..A.....S....V.....V....S....	52
2	1	...LQ...G..A.....S..IT.V.....V:..N:..	60
3	20	...L....G..A.....G...N.V.....T...N.S.D.N	79
4	1	...L..T..G..A.....S...H.V.....VV..S..S...N	60
5	1	...L....G..A.....S...H.V.....V..AG.S...N	60
6	1	...L....G..A.....S...H.V.....V..AG.S...N	60
7	1	...L....G..A.....P..S...D.V.....V...G.S...N	60
8	23	...LQ...G..A.....G...N.V.....M....N.D.N	82
9	1	...L....G..A.....G...N.V.....M....N.D.N	60
10	133	...LQ...G..A.....G...N.V.....M....N.D.N	192
11	20	...L....G..A.....G...N.V.....M....N.D.N	79
12	1	...L....G..A.....SR.S.H.V.....M...G.N.D.N	60
13	21	..HL....V..A.....N...H.V.....V..AG.N...N	80
14	23	...LQ...G..A.....G...N.V.....M....N.D.N	82
15	1	...LQ...G..A.....G...N.V.....M....N.D.N	60

1A7:	61	SALISRLSISKDNSKSQVFLKLSLQTDATYTCYAKL-----GNYPALDWMGQGTSTVTSS	117
1	53	.....P-----YDYExxxxx.Y....TL..	109
2	61	.....x-----xxxxxxx.K.Y.....	120
3	80	.T.K...T.T.....M.....R...SVSIYYGRSDK.FT..Y.....	144
4	61	...K.....M.....M...Rx-----xx.D.Y.M.Y.....	119
5	61	...M.....M.....M...Rx-----xxxxxx.Y.M.Y.....	120
6	61	...M.....M.....M...Rx-----xxxx.Y.M.Y.....	118
7	61	...M.....M...X...M...xx-----xxx.X.Y.M.Y.....	119
8	83	...K.....M...H...R...RE-----RDYR..Y....T....	138
9	61	...K.....M...H...R...RE-----RDYR..Y....TL....	116
10	193	...K.....M...H...R...RE-----RDYR..Y....T....	248
11	80	...K.....M...H...R...RE-----RDYR..Y....TL....	135
12	61	...K.....M.....M...RD-----GYDx.M.Y.....	117
13	81	...M.....M...I...I...x-----xxxxx.Y.M.Y.....	139
14	83	...K.....M...H...R...RE-----RDYR..Y....T....	138
15	61	...K.....M...H...R...RE-----RDYR..Y....T....	116

```

*                               *****
VL consensus: 61 SGVPDRFSGSGSGTDFTLKISRVEAEDLGYYCYFQGSHPWTFGGGTKLEIK 112
1A7:          61 ..... 112

```

```

*****
*****
VH consensus: 1 QVQLKESGPGLVAPSQSLSTICTVSGFSLTSYGVHWRQPPGKGLEWLGVIWGDGSTNYN 60
1A7:          1 ...V.....F..P.....T...S.I.....A....T...H 60

```

		*****	*****	
VH consensus:	61	SALKSRLSISKDNSKSQVFLKMNSLQTDDTARYYCARExxxxYYAMDYWGQGSVTVSS		119
1A7:	61	...I.....L.....T....KL--GN.D.L.W.....		117

Figure 4

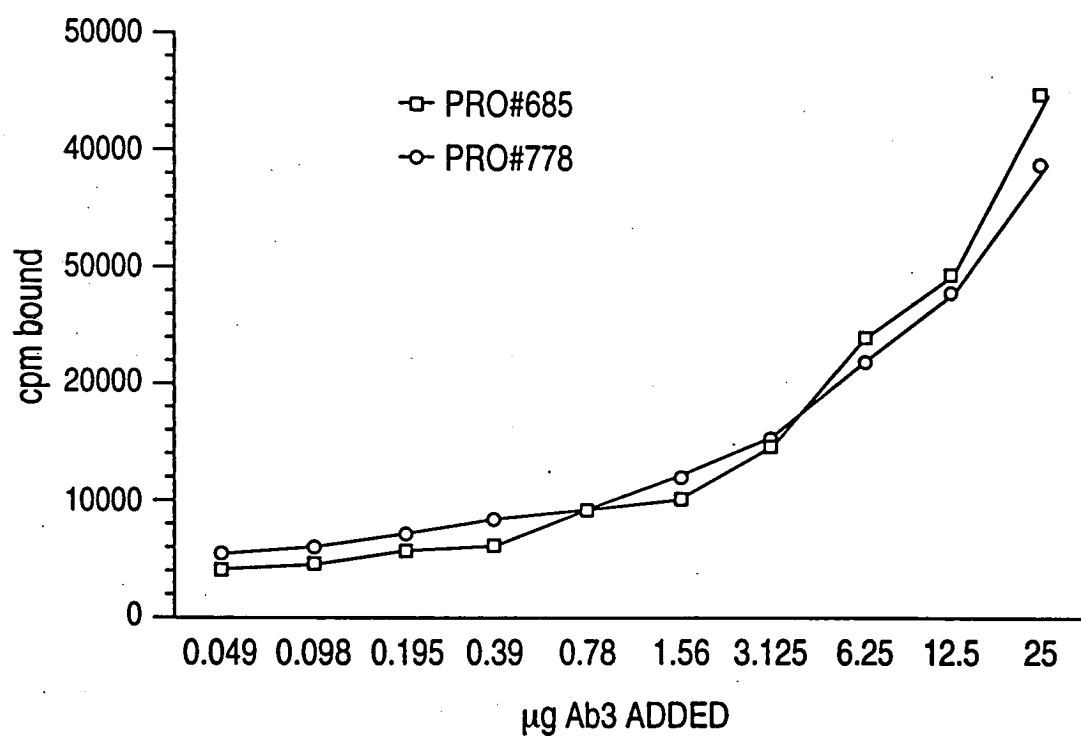


Figure 5

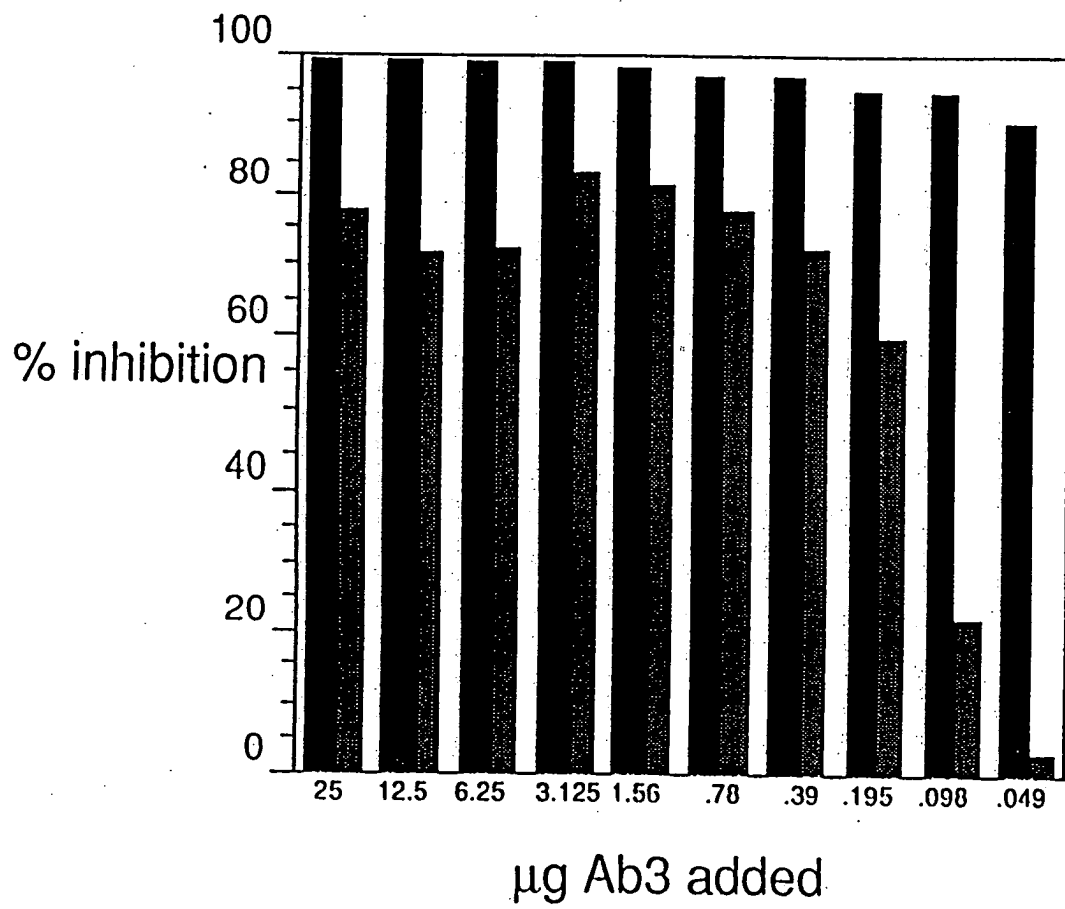


Figure 6

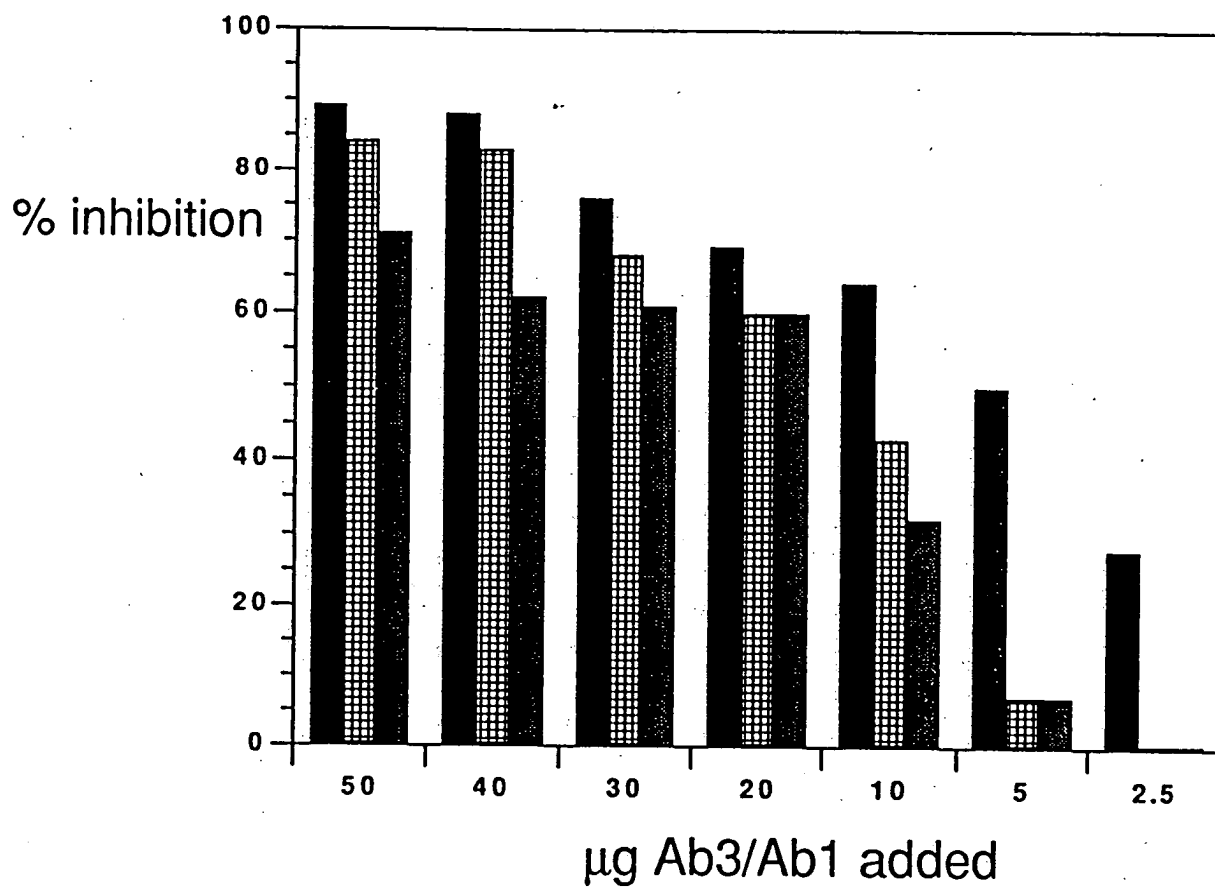


Figure 7(A)

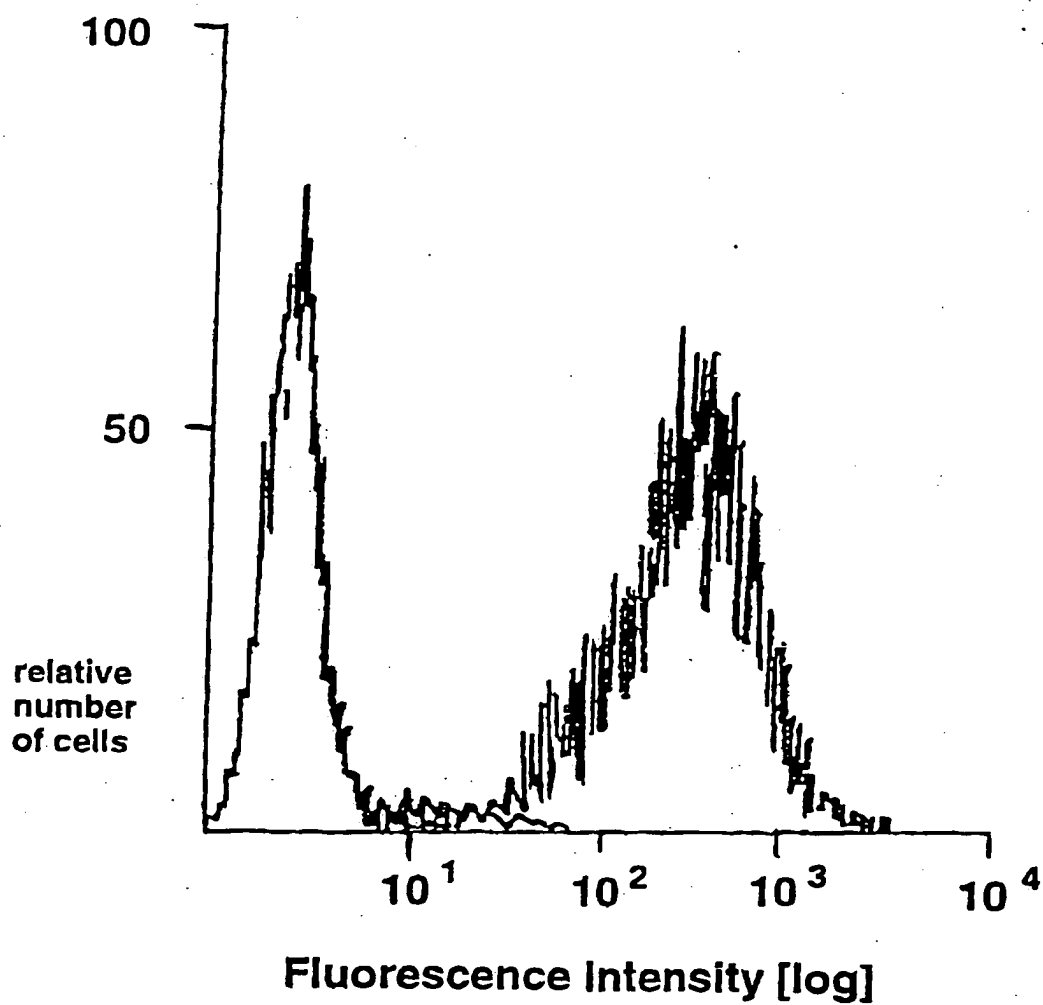


Figure 7(B)

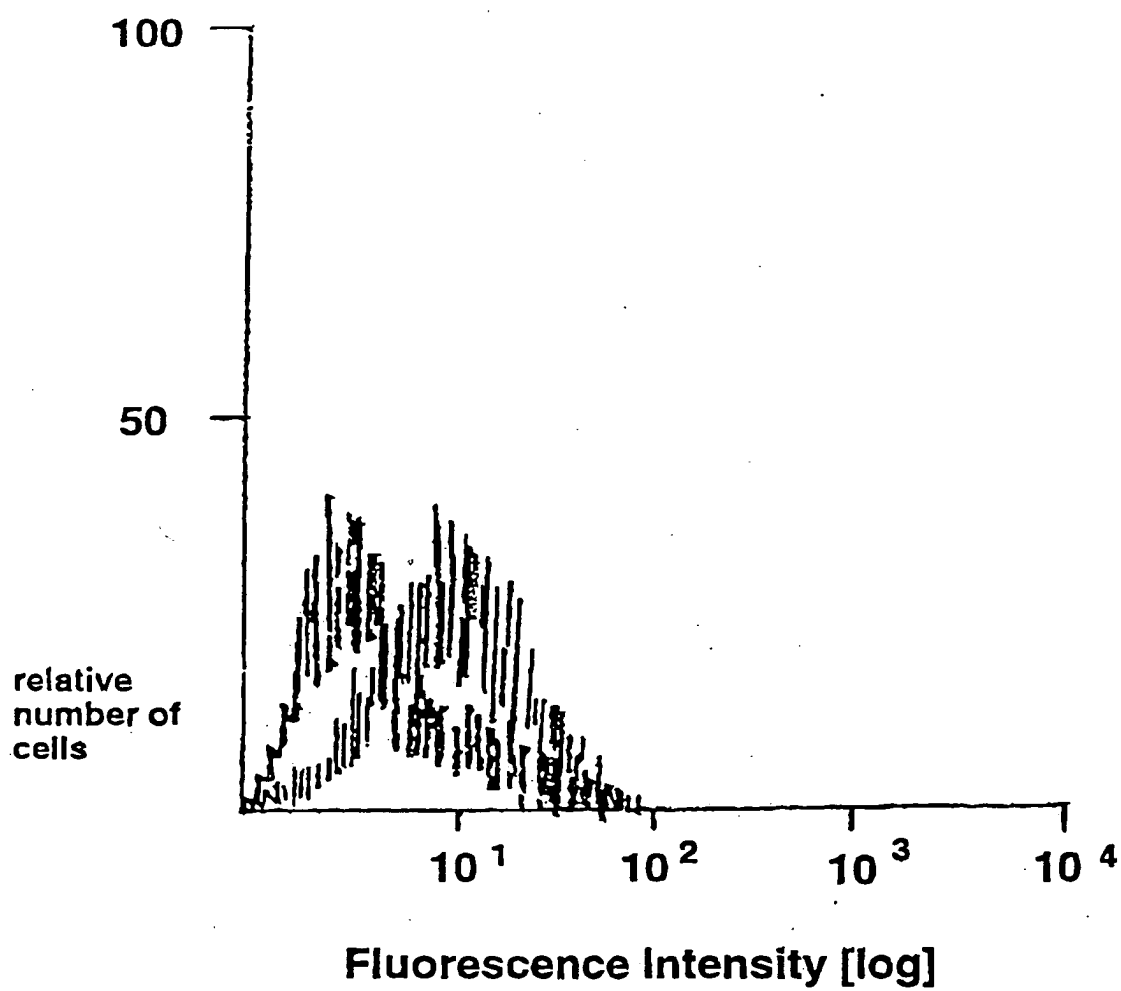
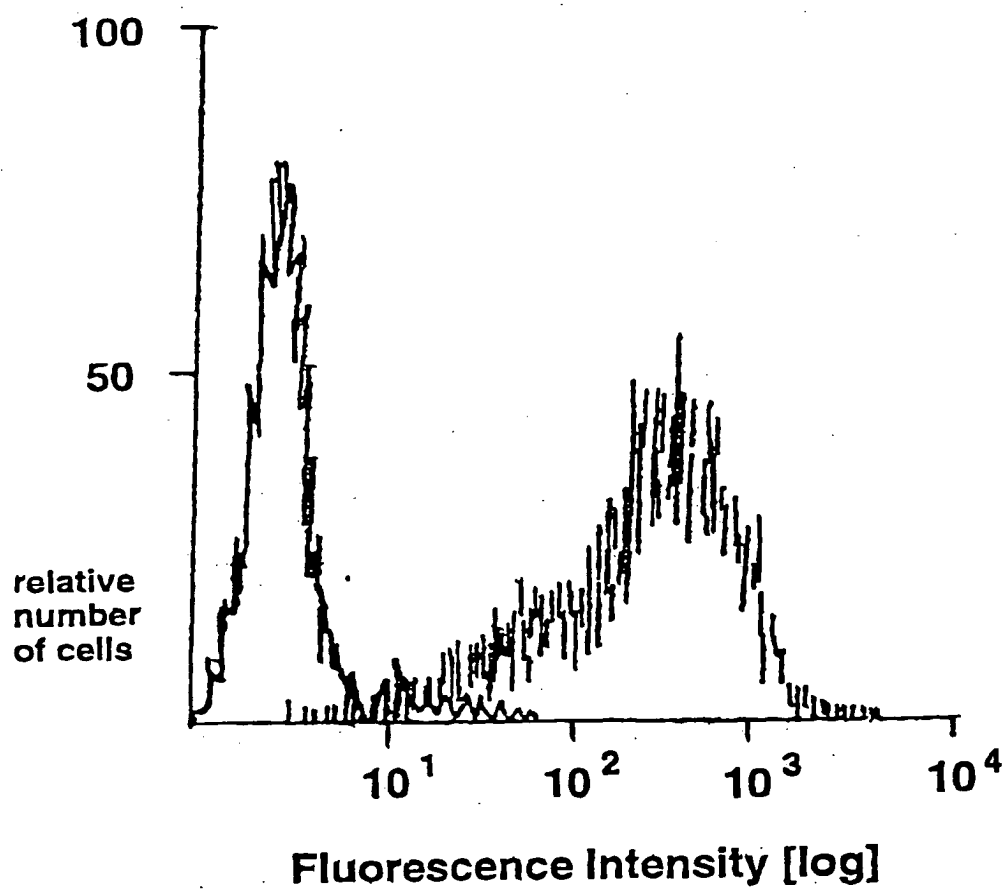


Figure 7(C)



005110-5556250

Figure 8

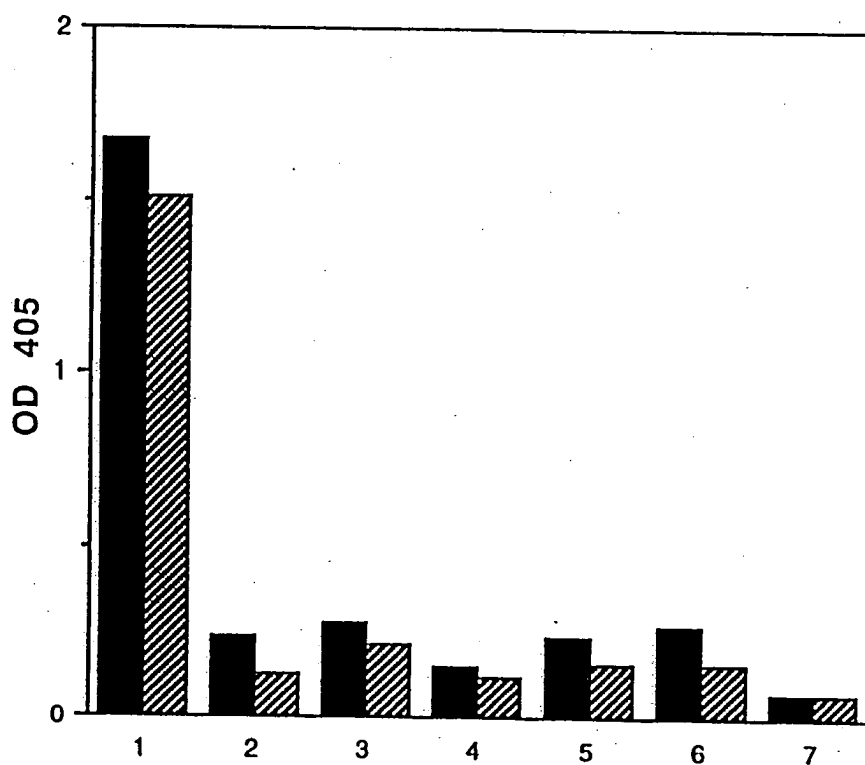


Figure 9

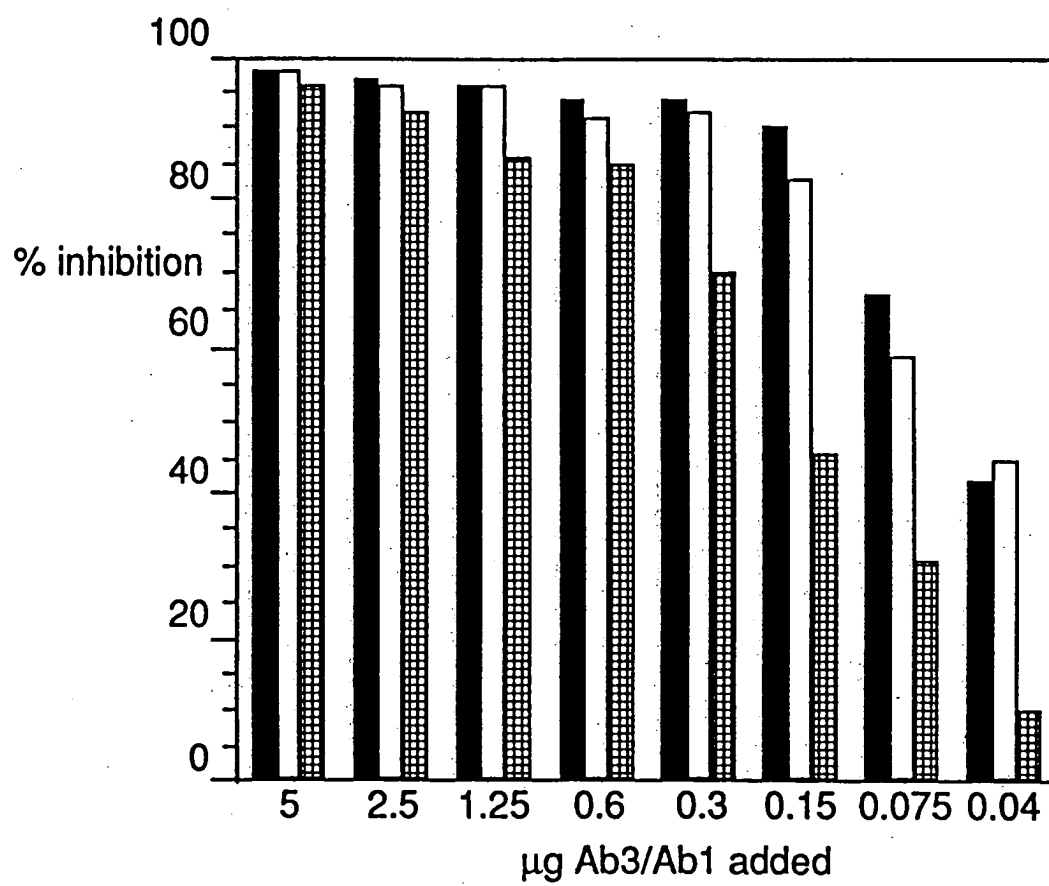
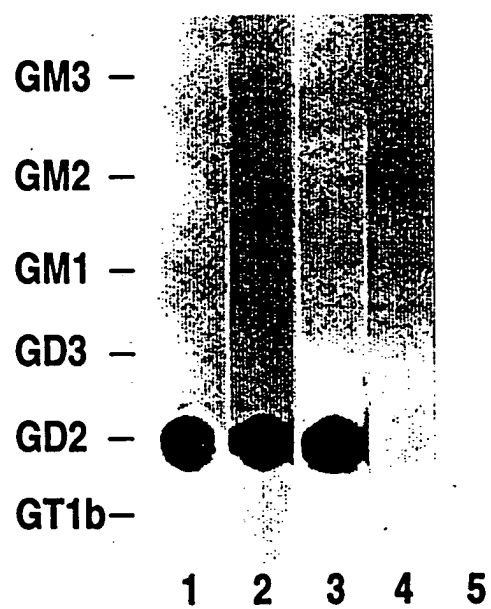
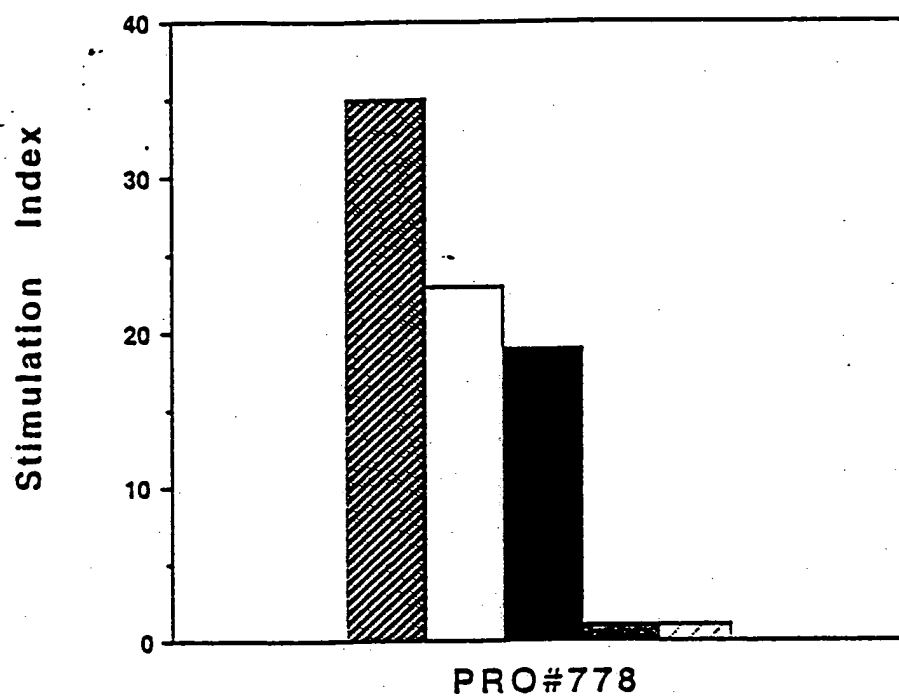


Figure 10



005140-2296260

Figure 11



655740-8856260

Figure 12

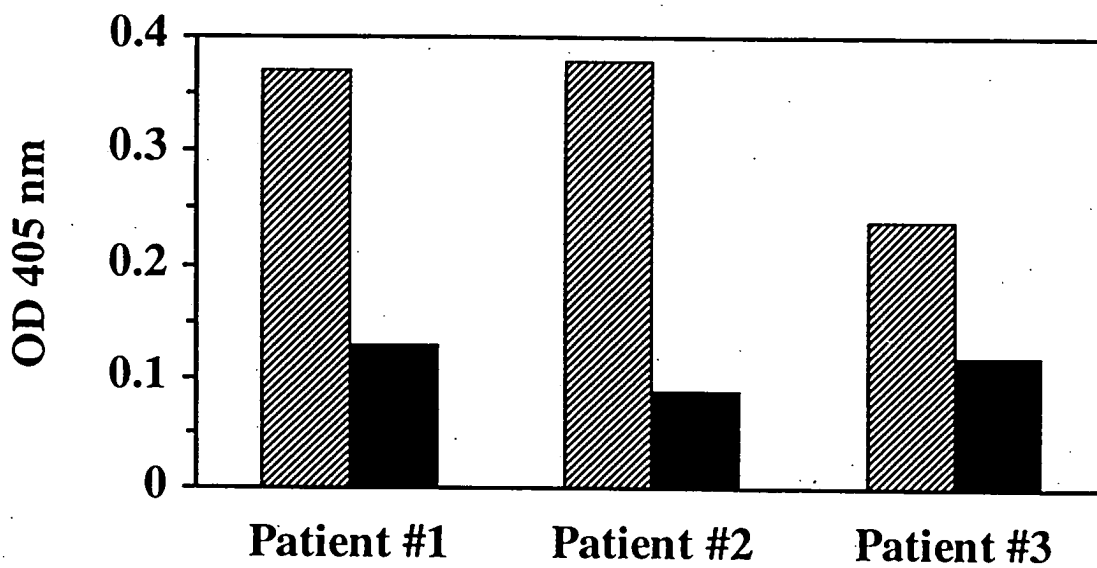
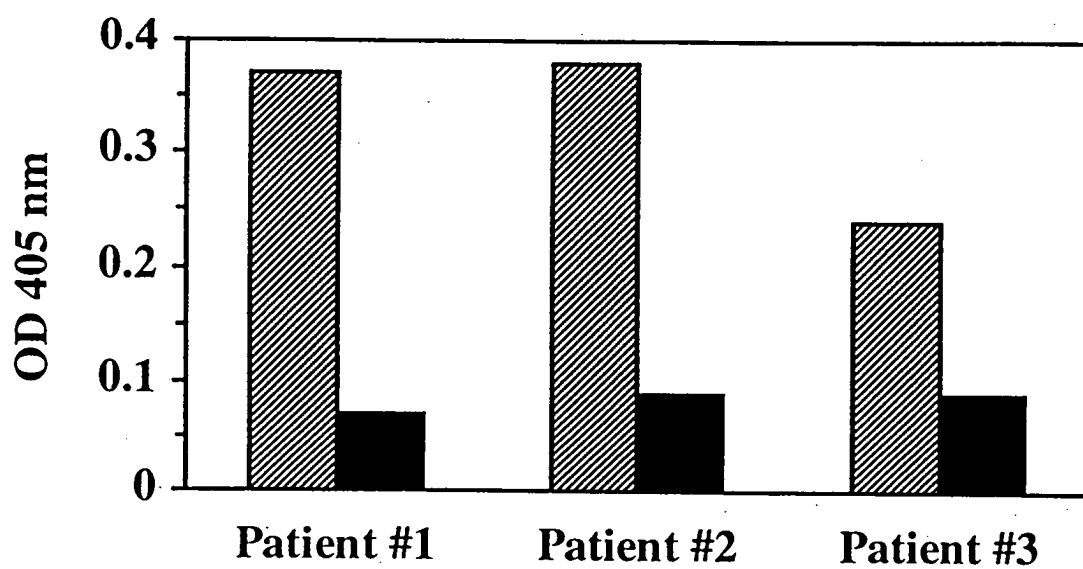


Figure 13

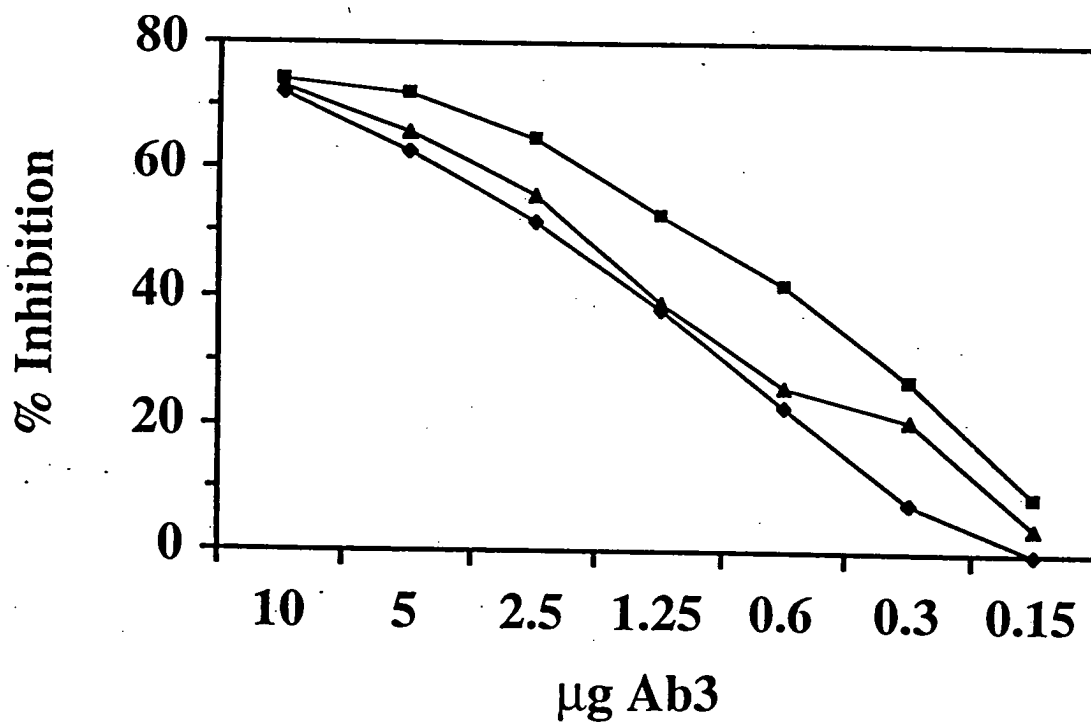
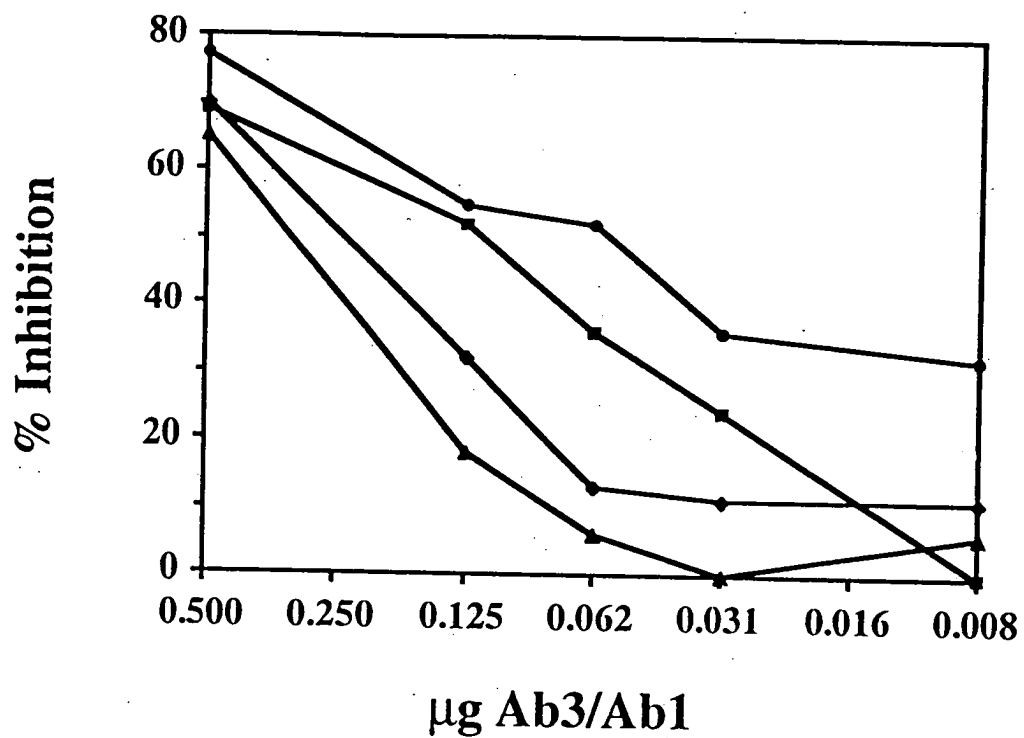


Figure 14

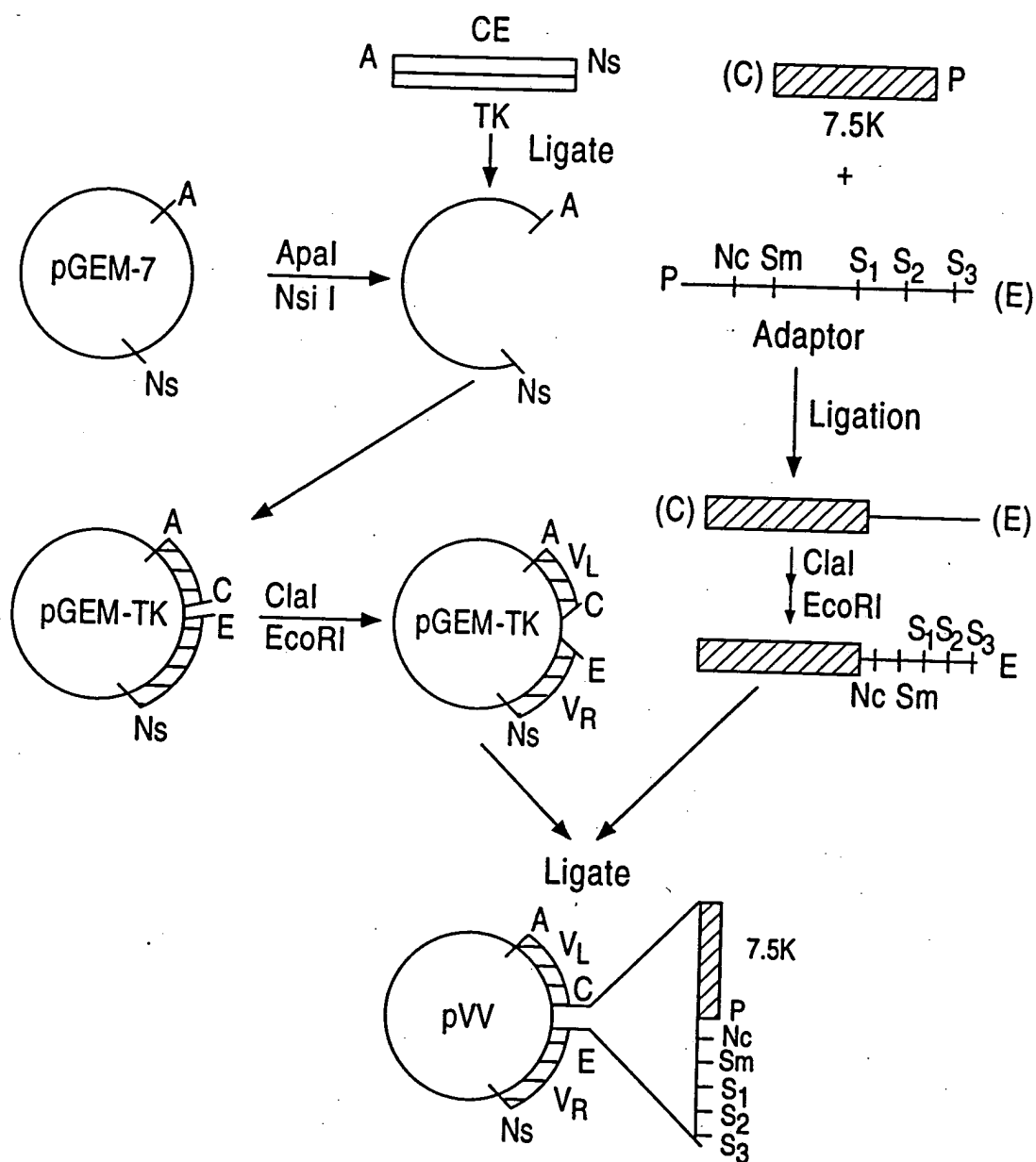


Figure 15

GCCGATATCACC!ATGGCTGTCTTGGGGCTGCTCTTCTGCCTGGTGACATTCCCAAGC
TGTGTCCTGTCCCAGGTGCAGGTGAAGGAGTCAGGACCTTTCTGGTGCCCCCCTCA
CAGAGCCTGTCCATCACATGCACTGTCTCAGGGTTCTCATTAACCACCTATGGTGTA
AGCTGGATTTCGCCAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGCAATTTGGGG
TGACGGGACCACAAATTATCATTCAGCTCTCATATCCAGACTGAGCATCAGCAAGGA
TAACTCCAAGAGCCAAGTTTTCTTAAAACTGAACAGTCTGCAAACCTGATGACACGGC
CACGTACTACTGTGCCAAACTGGGTAACACGATGCTCTGGACTACTGGGGTCAAGG
AACCTCAGTCACCGTCTCCTCAGGGGGAGGTGGCTCGGGCGGTGGCGGCTCGGGTGG
CGGCGGATCCGATGTTTTGATGACCCAAACTCCACTCTCCCTGCCTGTCAGTCTTGA
GATCAAGCCTCCATCTCTTGCAGATCTAGTCAGAGCATTGTACATAGTAATGGAAAC
ACCTATTTAGAATGGTACCTACAGAAACCAGGCCAGTCTCCAAACCTCCTGATCTAC
TTTGTTTCCAACCGATTTTCTGGGGTCCCAGACAGGTTCAAGTGGCAGTGGATCAGGG
ACAGATTTCACTCAAGATCAGCAGAGTGGAGGCTGAGGATCTGGGAGTTTATTAC
TGCTTTCAAGGTTACATGTTCCGTGGACGTTCCGGTGGAGGCACCAAGCTGGAAATC
AAATAATCTAGAGATG

1	mavlgllfcl	vtfpscvlsq	vqvkesgpfl	vppsqslsit	ctvsgfsltt
51	ygvswirqpp	gkglewlgai	wgdgttnyhs	alisrlsisk	dnsksqvflk
101	lnslqtddta	tyycaklgny	daldywgqgt	svtvssgggg	sggggsgggg
151	sdvlmtqtpl	slpvslgdqa	siscrssqsi	vhsngntyle	wylqkpgqsp
201	nlliyfvsnr	fsgvpdrfsg	sgsgtdftlk	isrveadlg	vyycfqgshv
251	pwtfgggtkl	eik			

Figure 16

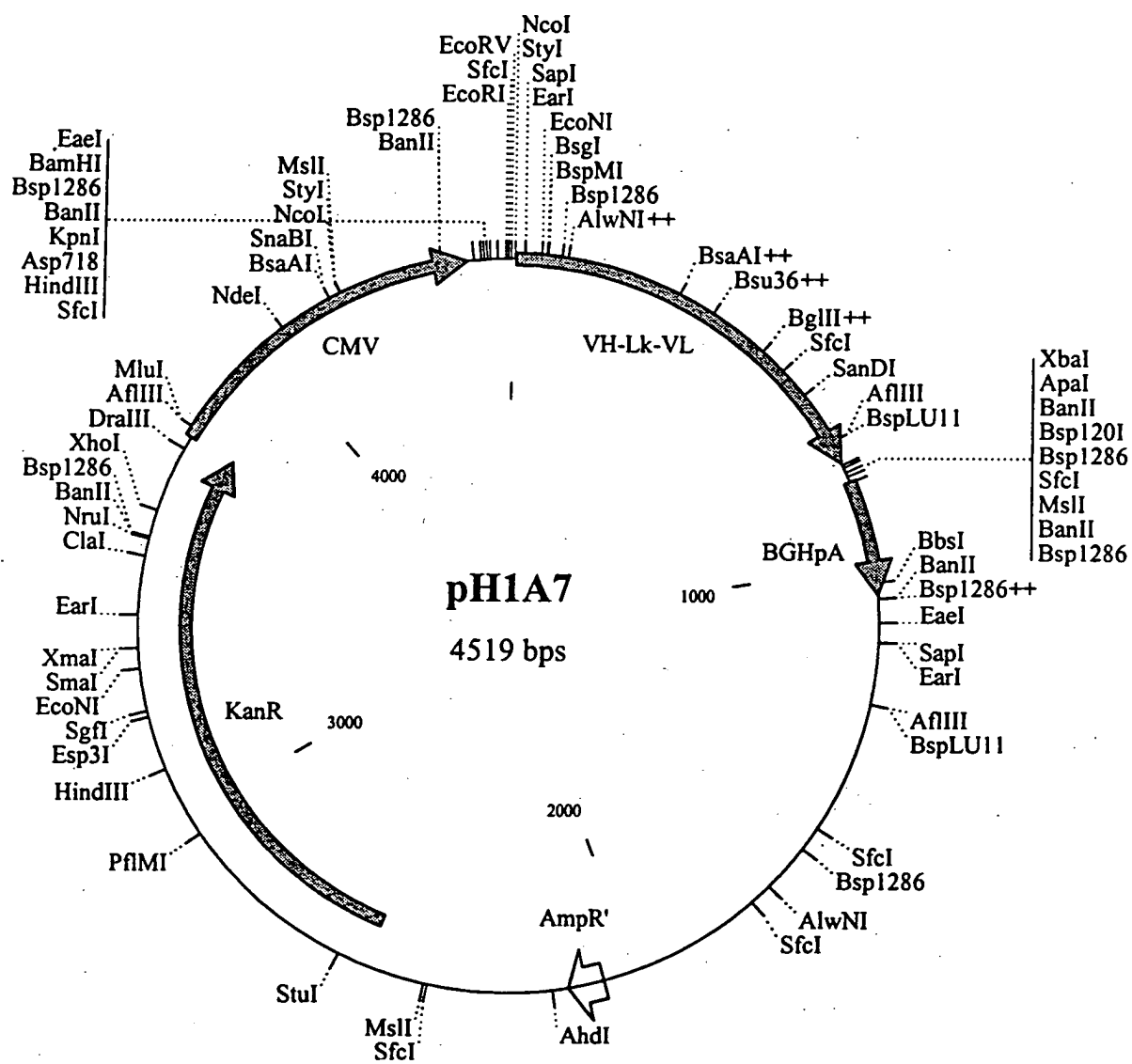


Figure 17(A)

>gb|L22327|MUSIGKAVAA Mouse rearranged immunoglobulin kappa-chain mRNA V-J

```
1 GATGTTTTGATGACCCAACTCCACTCTCCCTGCCTGTCAGTCTTGGAGATCAAGCCTCC 60
61 ATCTCTTGCAGATCTAGTCAGAGCATTGTACATAGTAATGGAACACCTATTTAGAATGG 120
121 TACCTGCAGAAACCAGGCCAGTCTCAAAGCTCCTGATCTACAAAGTTTCCAACCGATT 180
181 TCTGGGGTCCCAGACAGGTTTCAGTGGCAGTGGATCAGGGACAGATTTCACTCAAGATC 240
241 AGCAGAGTGGAGGCTGAGGATCTGGGAGTTTATTACTGCTTTCAAGGTTACATGTTCCG 300
301 TGGACGTTCCGGTGGAGGCACCAAGCTGGAATCAAA 336
```

>gb|L18941|MUSIG4388 Mouse rearranged immunoglobulin light chain Ab438 mRNA V-J

```
1 GATGTTTTGATGACCCAACTCCACTCTCCCTGCCTGTCAGTCTTGGAGATCAAGCCTCC 60
61 ATCTCTTGCAGATCTAGTCAGAGCATTGTACATAGTAATGGAACACCTATTTAGAATGG 120
121 TACCTGCAGAAACCAGGCCAGTCTCAAAGCTCCTGATCTACAAAGTTTCCAACCGATT 180
181 TCTGGGGTCCCAGACAGGTTTCAGTGGCAGTGGATCAGGGACAGATTTCACTCAAGATC 240
241 AGCAGAGTGGAGGCTGAGGATCTGGGAGTTTATTACTGCTTTCAAGGTTACATGTTCCG 300
301 TGGACGTTCCGGTGGAGGCACCAAGCTGGAATCAAA 336
```

>gb|M34588|MUSIGKABR Mouse Ig kappa-chain mRNA V-J region, partial cds.

```
1 GATGTTTTGATGACCCAACTCCACTCTCCCTNCCTGTCAGTCTTGGAGATCAAGCCTCC 60
61 ATCTCTTGCAGATCTAGTCAGAGCATTGTACATAGTAATGGAACACCTATTTAGAATGG 120
121 TACCTGCAGAAACCAGGCCAGTCTCAAAGCTCCTNATCTACAAAGTTTCCAACCGATT 180
181 TCTGGGGTCCCAGACAGGTTTCAGTGGCAGTGGATCAGGGACAGATTTCACTCAAGATC 240
241 AGCAGAGTGGAGGCTGAGGATCTGGGAGTTTATTACTGCTTTCAAGGTTACATGTTCCG 300
301 TGGACGTTCCGGTGGAGGCACCAAGCTGGAATCAAA 336
```

>gb|M32857|MUSIGKCSP Mouse Ig rearranged kappa-chain mRNA V-region, partial

```
1 GATGTTTTGATGACCCAACTCCACTCTCCCTGCCTGTCAGTCTTGGAGATCAAGCCTCC 60
61 ATCTCTTGCAGATCTAGTCAGAGCATTGTACATAGTAATGGAACACCTATTTAGAATGG 120
121 TACCTGCAGAAACCAGGCCAGTCTCAAAGCTCCTGATCTACAAAGTTTCCAACCGATT 180
181 TCTGGGGTCCCAGACAGGTTTCAGTGGCAGTGGATCAGGGACAGATTTCACTCAAGATC 240
241 AGCAGAGTGGAGGCTGAGGATCTGGGAGTTTATTACTGCTTTCAAGGTTACATGTTCCG 300
301 TGGACGTTCCGGTGGAGGCACCAAGCTGGAATC 333
```

>gb|M83723|MUSIGD2A Mouse monoclonal antiidiotypic antibody Ig kappa light

```
1 GATGTTTTGATGACCCAACTCCACTCTCCCTGCCTGTCAGTCTTGGAGATCAAGCCTCC 60
61 ATCTCTTGCAGATCTAGTCAGAGCATTGTACATAGTAATGGAACACCTATTTAGAATGG 120
121 TACCTGCAGAAACCAGGCCAGTCTCAAAGCTCCTGATCTACAAAGTTTCCAACCGATT 180
181 TCTGGGGTCCCAGACAGGTTTCAGTGGCAGTGGATCAGGGACAGATTTCACTCAAGATC 240
241 AGCAGAGTGGAGGCTGAGGATCTGGGAGTTTATTACTGCTTTCAAGGTTACATGTTCCG 300
301 CGGACGTTCCGGTGGAGGCACCAAGCTGGAATCAAA 336
```

>emb|Z22035|MDIGKVAH M.domesticus IgK variable region.

```
1 GATGTTGTGATGACCCAACTCCACTCTCCCTGCCTGTCAGTCTTGGAGATCAAGCCTCC 60
61 ATCTCTTGCAGATCTAGTCAGAGCATTGTACATAGTAATGGAACACCTATTTAGAATGG 120
121 TACCTGCAGAAACCAGGCCAGTCTCAAAGCTCCTGATCTACAAAGTTTCCAACCGATT 180
181 TCTGGGGTCCCAGACAGGTTTCAGTGGCAGTGGATCAGGGACAGATTTCACTCAAGATC 240
241 AGCAGAGTGGAGGCTGAGGATCTGGGAGTTTATTACTGCTTTCAAGGTTACATGTTCCG 300
301 TGGACGTTCCGGTGGAGGCACCAAGCTGGAATCAAA 336
```

665140-665660

Figure 17(B)

>gb|M34589|MUSIGKAB Mouse Ig kappa-chain mRNA V-J region, partial cds.

```
1 GATGTTTTGATGACNCAAACCTCCACTCTCCCTGCCTGTCAGTCTTGGAGATCAAGCCTCC 60
61 ATCTCTTGAGATCTAGTCAGAGCATTGTACATAGTAATGGAAACACCTATTTAGAATGG 120
121 TACCTGCAGAAACCAGGCCAGTCTCAAAGCTCCTNATCTACAAAGTTTCCAACCGATT 180
181 TCTGGGGTCCCAGANAGGTTTCAGTGGCAGTGGATCAGGGACAGATTTCACTCAAGATC 240
241 AGCAGAGTGGAGGCTGAGGATCTGGGAGTTTATTACTGCTTTCAAGGTTACATGTTCCG 300
301 TGGACGTTCCGTGGAGGCACCAAGCTGGAAATCAA 336
```

>gb|M32858|MUSIGKCS Mouse Ig rearranged kappa-chain mRNA V-region, partial

```
1 GATGTTTTGATGACCCAAACCTCCACTCTCCCTGCCTGTCAGTCTTGGAGATCAAGCCTCC 60
61 ATCTCTTGAGATCTAGTCAGAGCATTGTACATAGTAATGGAAACACCTATTTAGAATGG 120
121 TACCTGCAGAAACCAGGCCAGTCTCAAAGCTCCTGATCTACAAAGTTTCCAACCGATT 180
181 TCTGGGGTCCCAGACAGGTTTCAGTGGCAGTGGATCAGGGACAGATTTCACTCAAGATC 240
241 AGCAGAGTGGAGGCTGAGGATCTGGGAGTTTATTACTGCTTTCAAGGTTACATGTTCCG 300
301 TGGACGTTCCGTGGAGGCACCAAGCTGGAAATC 333
```

>emb|X87231|MMKAPLI M.musculus mRNA for antibody light chain

```
89 GATGTTTTAATGACCCAAACCTCCACTCTCCCTGCCTGTCAGTCTTGGAGATCAAGCCTCC 148
149 ATCTCTTGAGATCTAGTCAGAGCATTGTACATAGTAATGGAAACACCTATTTAGAATGG 208
209 TACCTGCAGAAACCAGGCCAGTCTCAAAGCTCCTGATCTACAAAGTTTCCAACCGATT 268
269 TCTGGGGTCCCAGACAGGTTTCAGTGGCAGTGGATCAGGGACAGATTTCACTCAAGATC 328
329 AGCAGAGTGGAGGCTGAGGATCTGGGAGTTTATTACTGCTTTCAAGGTTACATGTTCCG 388
389 TGGACGTTCCGTGGAGGCACCAAGCTGGAAATCAA 424
```

>gb|U29428|MMU29428 Mus musculus anti-PC rearranged Ig kappa chain V-J region

```
13 GATGTTTTGATGACCCAAACCTCCACTCTCCCTGCCTGTCAGTCTTGGAGATCAAGCCTCC 72
73 ATCTCTTGAGATCTAGTCAGAGCATTGTACATAGTAGTGGAAACACCTTTTGAATGG 132
133 TACCTGCAGAAACCAGGCCAGTCTCAAAGCTCCTGATCTACAAAGTTTCCAACCGATT 192
193 TCTGGGGTCCCAGACAGGTTTCAGTGGCAGTGGATCAGGGACAGATTTCACTCAAGATC 252
253 AGCAGGTTGGAGGCTGAGGATCTGGGAGTTTATTACTGCTTTCAAGGTACATGTTCCG 312
313 TGGACGTTCCGTGGAGGCACCAAGCTGGAAATCAA 348
```

09293637-041599

Figure 18(A)

>gb|U01185|MMU01185 Mus musculus BALB/c anti-glycophorin A type N

```
1 CAGGTGCAGCTGACAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCTGTCCATC 60
61 ACATGCACTGTCTCAGGGTTCTCATTAAACCAGCTATGGTATAACCTGGGTTGCCAGCCT 120
121 CCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGGTGACGGAAACACAAATTATCAT 180
181 TCAGCTCTCATATCCAGACTGAGCATCAGCAAGGATAACTCCAAGAGCCAAGTTTCTTA 240
241 AAACCTGAACAGTCTGCAAACTGATGACACAGCCACGTACTACTGTGCCAAA 291
292 ----- 315
316 GCTAAGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTCA 360
```

>gb|M26985|MUSIGH1PR Mus musculus productively rearranged IgH chain allele 1,

```
1 CAGGTGCAGCTGAAGGAGACAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCTGTCCATC 60
61 ACATGCACCGTCTCAGGGTTCTCATTAAACCAGCTATGGTGTACACTGGGTTGCCAGCCT 120
121 CCAGGAAAGGGTCTGGAGTGGCTGGTAGTGATATGGAGTGATGGAAGCACAACTATAAT 180
181 TCAGCTCTCAAATCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTCTTA 240
241 AAAATGAACAGTCTCCAACTGATGACACAGCCATGTACTACTGTGCCAGAC 292
293 ----- 300
301 GGTGACTACTATGCTATGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTCA 357
```

>dbj|D17387|PVY18 Potato virus Y immunoglobulin gene for monoclonal antibody

```
58 CAGGTGCAGCTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCTGTCCATC 117
118 ACATGCACTGTCTCAGGGTTCTCATTAAACCAGCTATGGTGTACACTGGGTTGCCAGCCT 177
178 CCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGGTGACGGGAGCACAAATTATCAT 237
238 TCAGCTCTCATATCCAGACTGAGCATCAGCAAGGATAACTCCAAGAGCCAAGTTTCTTA 297
298 AAACCTGAACAGTCTGCAAACTGATGACACAGCCACGTACTACTGTGCCAAGCATCTTGAC 357
358 TAC 360
361 TGGGGCCAAGGCACCACTCTCAGTCTCCTCA 393
```

>gb|M36228|MUSIGHAEI Mouse Ig heavy-chain mRNA V region, partial cds from

```
1 CAGGTGCAGCTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCTGTCCATC 60
61 ACTTGCACTGTCTCTGGGTTTTTCATTAAACCAGCTATGGTGTACACTGGGTTGCCAGCCT 120
121 CCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGGTGGTGAAGCACAAATTATAAT 180
181 TCGGCTCTCATGTCCAGACTGAGCATCAGCAAGACAACTCCAAGAGCCAAGTTTCTTA 240
241 AAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCAGAGGGCATTAC 300
301 TACG 304
305 - 305
306 CTACTATGCTATGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCC 354
```

>gb|L48671|MUSAB Mus musculus (cell line C3H/F2-22) chromosome 12 anti-DNA

```
1 CAGGTGCAGCTCAAGGAGTCAGGACCTGTCTCGTGGCGCCCTCACAGAGCCTGTCCATC 60
61 ACTTGCACTGTCTCTGGGTTTTTCATTAAACCAGCTATGGTGTACACTGGGTTGCCAGCCT 120
121 CCAGGCAAGGGTCTGGAGTGGCTGGGAGTAATATGGGGTGGTGAAGCACAAATTATAAT 180
181 TCAGCTCTCATGTCCAGACTGAGCATCAGCAAGACAACTCCAAGAGCCAAGTTTCTTA 240
241 AAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCAAAC 292
293 ----- 304
305 ACAATGCTATGGACTACTGGGGTCAAGGAACCTCAGTCACNGTCTCCTCA 354
```

[illegible]

>gb|M36217|MUSIGHADX Mouse Ig heavy-chain mRNA V region, partial cds.

1 CAGGTNCAGCTGAAGGAGTCAGGACCTGGCCTGGTGGCACCTCAGAGCCTGTCCATC 60
61 ACATCGACTGCTCTGGGTTCTCAATTCAGATATAGTGTACACTGGTGTCCGCAACT 120
121 CCAGGAAGGGGCTCTGAGTGGCTGGGAATGATATGGGGTGGTGGAAACACAGACTAAT 180
181 TCAGCTCTCAAATCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTCTTA 240
241 AAAATGAACAGCTCGCAAATCATGACACAGCCATGTACTACTGTGCCAGAGAGGTTAC 300
361 TACGACTATGCTATGGACTACTGGGGTCAAGGAACCTCAGTCACTGGTCTCC 351

>gb|M36217|MUSIGHADX Mouse Ig heavy-chain mRNA V region, partial cds.

1 CAGGTGCAGCTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCTGTCCATC 60
61 ACTTGCACTGTCTGGGTTTTCAATTAACAGCAGTATGGTGACAGCTGGGTTCGCCAGCCT 120
121 CCAGCAAGAGGCTCTGGAGCTGGCTGGGAGTAAATAGGCTGGTGGGAAGCAAAATATAAT 180
181 TCGGCTCTCATGTCCAGATGAGCATCAGCAAGTACCAAGCAAACTCCAGAGCCAAGTTTTCTTA 240
241 AAAATGAACAGTCTGCAAACCTGATGACACAGCCATGTACTACTGTGCCAGA 291
292 ----- 312
313 TACTATGCTATGGACTACTGGGCTCAGGGAACCTCAGTCACCGTCTCC 360

>gb|J04609|MUSIGMAF Mus musculus IgM chain (anti-fluorescein antibody 18-2-3)

67 CACGTGCACCTGAAGGAGTCAGGACCTGTCCTGGTGGCGCCCTCACAGAGCCTGTCCATC 126
127 ACTTGCACTGTCTGCGGGTTTCATTAACCAACTATGGTGACACTGGGTTCGCCAGCCT 186
187 CCAGGAAGGGTCTCGAGTGGCTGGGAGTAATATGGCGTGGTGAACCACAATTAAT 246
247 TCAGCTCTCATGTCCACAGTCAGCATCAGCAACCAATTCGAAGCCAACTTTCTTA 306
307 AAAATGAACAGTCTGCAAAATTGATGACACAGCCATATACTACTGTGCCAAAC 358
359 ----- 375
376 TACTATGCTATGGACTATTGGGGTCAAGGAACCTCAGTCACCGTCTCCTCA 426

>gb|M34626|MUSIGHACK Mouse Ig rearranged heavy chain (NC19-F8) mRNA VH-DH-JH4

1 CAGGTGCAGCTGAAGGAGTCAGGACCTGGCTGGTGGCGCCCTCACAGAGCCTGTCCATC 60
61 ACTTGCACTGTCTCGGGTTTCCATTAAACCAGCTATGGTGTAGACTGGGTTCGCCAGCCT 120
121 CCAGGAAAGGGCTCTGGAGCTGGCTGGGAGTAATGGGGTGGTGAAGCAACAAATTATAAT 180
181 TCAGCTCTCATGTCCAGACTGAGCATCAGCAACAAGCAACTCAAGAGCCAAAGTTTCTTA 240
241 AAAATGAACAGCTGCNAACTGATGACACAGCCATGTACTACTGTGCC 288
289 ----- 299
300 ACGGGGNNTTTACTATGCTATGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTC 356

>gb|L31403|MUSIGHCVX Mouse immunoglobulin heavy chain variable region (Igh-V)

58 CAGGTGCACCTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCTGTCCATC 117
118 ACTTGCACTGCTCTGGATTTTTCATTAAACCACCTATGGTGATACCTGGTTTCGCCAGCCT 177
178 CCAGGAAAGGGTCTGGAGTGGCTGGGACATATGGGCTGGGAAACACAGATTATAAT 237
238 TGGGCTCTCATGTGCAGACTGAGCATCAACAAGACAACCTCCAAGAGCCAAGTTTCTTA 297
298 AAAATGAACAGCTGCAAGCTGATGACACAGCCATGTACTACTGTGCCAGATT 350
351 ----- 367
368 ACGACTATGCTGTGGAAGTCTGGGGTCAAGGAACCTCAGTCACCGCTCTCCTCA 420